

JAN 1631

DOCKET NO.: CHIR-0160

356.001

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JUL 31 2001  
PATENT  
TECH CENTER 1600/2900



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Scarlato et al.

Serial No.: 09/303,518

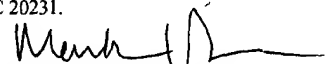
Group Art Unit: 1631

Filing Date: April 30, 1999

Examiner: S. Joe Zhou

For: NEISSERIAL ANTIGENS

DATE OF DEPOSIT: 7/26/2001  
I HEREBY CERTIFY THAT THIS PAPER IS BEING DEPOSITED  
WITH THE UNITED STATES POSTAL SERVICE AS FIRST  
CLASS MAIL, POSTAGE PREPAID ON THE DATE INDICATED  
ABOVE AND IS ADDRESSED TO BOX SEQUENCE,  
ASSISTANT COMMISSIONER FOR PATENTS, WASHINGTON,  
DC 20231.

  
TYPED NAME: Mark J. Rosen  
REGISTRATION NO.: 39,822

**BOX SEQUENCE**

Assistant Commissioner for Patents  
Washington DC 20231

**RESPONSE TO COMMUNICATION AND NOTICE TO COMPLY WITH  
REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING  
NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURE**

In response to the "Notice to Comply With Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures" dated May 31, 2001 and the subsequent Examiner's Communication dated June 26, 2001, to which the response date has been extended to July 26, 2001, enclosed herewith is:

- ☒ Statement to Support Filing and Submission in Accordance with 37 CFR §§1.821 through 1.825;

DOCKET NO.: CHIR-0160  
356.001


- 2 -

PATENT

- ☒ Sequence Listing (pp. 1-1087);
- ☒ Copy of the computer readable form of amended Sequence Listing;
- ☒ Copy of Notice to Comply With Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures;
- ☐ Petition for Extension of Time;
- ☒ Other: Amendment and Response.

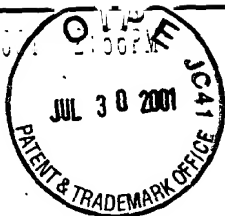
The Commissioner is hereby authorized to charge any underpayment associated with this communication or credit any overpayment to Deposit Account No. 23-3050. This sheet is attached in duplicate.

Date: 7/26/2001

  
\_\_\_\_\_  
Mark J. Rosen  
Registration No. 39,822

Woodcock Washburn Kurtz  
Mackiewicz & Norris LLP  
One Liberty Place - 46th Floor  
Philadelphia PA 19103  
Telephone: (215) 568-3100  
Facsimile: (215) 568-3439

JUL 15 2001


**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

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Washington, D.C. 20231

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JUL 1 2001

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APPLICATION NO/ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
097303,518	04/30/99	SCARLATO	CHIR-0160

027476

HZ12/0531

 Chiron Corporation  
Intellectual Property - R440  
P.O. Box 8097  
Emeryville CA 96662-8097


EXAMINER

LUNDGREN, J

ART UNIT

PAPER

1631

13

05/31/01

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

The reply filed on July 31, 2000, is not fully responsive to the prior Office Action because: this application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures (i.e., errors in the CRF).

A CRF, fully compliant with the above stated rules, is required for any search and examination to proceed. As clearly stated in paragraph 4 of the Office Action mailed on May 26, 2000, and the letter mailed on September 5, 2000, a fully responsive communication will fulfill the sequence rules, as required. Since the period for reply set forth in the prior Office action and letter has expired, this application will become abandoned unless applicant corrects the deficiency and obtains an extension of time under 37 CFR 1.136(a).

The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. In no case may an applicant reply outside the SIX (6) MONTH statutory period or obtain an extension for more than FIVE (5) MONTHS beyond the date for reply set forth in an Office action. A fully responsive reply must be timely filed to avoid abandonment of this application.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Jeffrey S. Lundgren whose telephone number is (703) 306-3221. The Examiner can normally be reached on Monday-Friday from 7:00 AM to 5:00 PM (EST).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Dr. Michael Woodward, can be reached at (703) 308-4028.

Any inquiries of a general nature relating to this application should be directed to the Technical Center Receptionist whose telephone number is (703) 308-0196.

Papers related to this application may be submitted by facsimile transmission. Papers should be faxed to Group 1631 using (703) 308-0294. Please notify the Examiner of incoming facsimiles prior to sending papers to the aforementioned fax number. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG (November 15, 1989).

Jeffrey S. Lundgren, Ph.D.

 JUN 2001  
P000356.001

6/30/01

per Dr. Woodward on 6/25/01

  
JOHN S. BRUSCA, Ph.D.  
PRIMARY EXAMINER

**NOTICE TO COMPLY WITH  
SEQUENCE RULES**

JUL 30 2001 Application N .

09/303,518

Examiner

Jeffrey S. Lundgren

Applicant(s)

SCARLATO ET AL.

Art Unit

1631

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JUL 31 2001

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**NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING  
NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES**

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reasons:

- ☒ 1. This application clearly fails to comply with the requirements of 37 CFR 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 CFR 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 CFR 1.821(e).
- ☒ 4. A copy of the "Sequence Listing in computer readable form has been submitted. However the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked up "Raw Sequence Listing".
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable. A Substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 CFR 1.821(e).
- ☐ 7. Other:

**Applicant must provide:**

- ☐ An initial or ☒ A substitute computer readable form copy of the Sequence Listing.
- ☐ An initial or ☐ A Substitute paper copy of the Sequence Listing as well as an amendment directing its entry into the specification.
- ☒ A statement that the content of the paper and computer readable copies are the same, and, where applicable, include no new matter, as required by 37 CFR 1.821(e), (f), or (g) or 1.825(b) or (d).

**FOR QUESTIONS PLEASE CONTACT:**

Rules Interpretation (703) 308-4216  
CRF Submission Help (703) 308 4212  
PatentIn software help (703) 308 6856

**PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE**



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JUL 31 2001  
10-27-01  
TECH CENTER 1600/2900

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/303,518A

DATE: 10/12/2000  
TIME: 15:29:09

Input Set : N:\jumbos\09303518  
Output Set: N:\CRF3\10122000\I303518A.raw

Does Not Comply  
Corrected Diskette Needed

P.6

3 <110> APPLICANT: Scarlato, Enzo  
4 Massignani, Vega  
5 Rappuoli, Rino  
6 Pizza, Mariagrazia  
7 Grandi, Guido  
9 <120> TITLE OF INVENTION: Neisserial Antigens  
11 <130> FILE REFERENCE: CHIR0160  
13 <140> CURRENT APPLICATION NUMBER: 09/303,518A  
14 <141> CURRENT FILING DATE: 1999-04-30  
16 <150> PRIOR APPLICATION NUMBER: PCT/IB98/01665  
17 <151> PRIOR FILING DATE: 1998-10-09  
19 <160> NUMBER OF SEQ ID NOS: 1098  
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56 <223> OTHER INFORMATION: N=Unknown  
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61 gcagcagccc aatcaaatct gggcgtaaty tatctacaaa ggacgcgcgt ggcgcgggat 180  
62 gatgctgaag cggtcagatg gtatcggcag ccggcggaac aggggtttag ccaagcccaa 240  
63 tacaatttgg gctggatgta tgccaacggg cgcgcagtgc gccaatgta taccgaagcg 300

RAW SEQUENCE LISTING  
PATENT APPLICATION N: US/09/303,518A DATE: 10/12/2000  
TIME: 15:29:08

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66 cggcagggcg cagcgagggg ggtagcccaa gcccaaaaca atttgggcgt gatgtatgcc 480
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110 20 25 30
W--> 112 Leu Xaa Ala Ala Gln Gly Asn Ala Ala Gln Tyr Asn Leu Gly
113 35 40 45
W--> 115 Ala Met Tyr Xaa Gln Arg Thr Arg Val Arg Arg Asp Asp Ala Glu Ala
116 50 55 60
118 Val Arg Trp Tyr Arg Gln Pro Ala Glu Gln Gly Leu Ala Gln Ala Gln
119 65 70 75 80
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122 85 90 95
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125 100 105 110
127 Val Gln Ala Gln Tyr Asn Leu Gly Val Ile Tyr Ala Glu Gly Arg Gly
128 115 120 125

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RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/303,518A  
 DATE: 10/12/2000  
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 Output Set: N:\CBF3\10122000\I303518A.raw

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134 145      /      150      155      160
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141 <211> LENGTH: 597
142 <212> TYPE: DNA
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148 gcagcagccc aatacaattt gggcgcaatg tattacaagc gacgcggcgt gcgccgggat 180
149 gatgctgaag cgttcagatg gtatcggcag gcggcggaac aggggttagc ccaagcccaa 240
150 tacaatttgg gctggatgta tgcacaacgg cgcggcgtgc gccaaagatg taccgaagcg 300
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152 gtgatatacg ccgaagggacg tggagtgcgc caagacgatg togaagcggc cagatggctt 420
153 cggcagggcg cagcgcaggg ggtagcccaa gcccaaaaca atttgggcgt gatgtatgcc 480
154 gaaagacgcg gcgtgcgcgc agaccgcgcc ctgcacaaag aatgggttgg caagccttgc 540
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168      20      25      30
170 Leu Gln Ala Ala Ala Gln Gly Asn Ala Ala Ala Gln Tyr Asn Leu Gly
171      35      40      45
173 Ala Met Tyr Tyr Lys Gly Arg Gly Val Arg Arg Asp Asp Ala Glu Ala
174      50      55      60
176 Val Arg Trp Tyr Arg Gln Ala Ala Glu Gln Gly Leu Ala Gln Ala Gln
177      65      70      75      80
179 Tyr Asn Leu Gly Trp Met Tyr Ala Asn Gly Arg Gly Val Arg Gln Asp
180      85      90      95
182 Asp Thr Glu Ala Val Arg Trp Tyr Arg Gln Ala Ala Ala Gln Gly Val
183      100      105      110
185 Val Gln Ala Gln Tyr Asn Leu Gly Val Ile Tyr Ala Glu Gly Arg Gly
186      115      120      125
188 Val Arg Gln Asp Asp Val Glu Ala Val Arg Trp Phe Arg Gln Ala Ala
189      130      135      140
191 Ala Gln Gly Val Ala Gln Ala Gln Asn Asn Leu Gly Val Met Tyr Ala
192 145      150      155      160
194 Glu Arg Arg Gly Val Arg Gln Asp Arg Ala Leu Ala Gln Glu Trp Phe
195      165      170      175
197 Gly Lys Ala Cys Gln Asn Gly Asp Gln Asp Gly Cys Asp Asn Asp Gln

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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/101,518A DATE: 10/12/2000  
TIME: 15:29:08Input Set : H:\jumbos\09303518  
Output Set : H:\CRF3\10122000\I303518A.raw

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206 <212> TYPE: DNA
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209 <400> SEQUENCE: 5
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212 gcagcagccc aatacaattt gggcgtgatg tatgccgaaa gacgcggcgt ggcacaaqac 180
213 cgcgcctctg cacaagaatg gcttggcang gcttgcatac acggatacca agacagctgc 240
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219 <212> TYPE: PRT
220 <213> ORGANISM: Neisseria meningitidis
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227      20          25          30
229 Leu Gln Ala Ala Ala Gln Gly Asn Ala Ala Ala Gln Asn Asn Leu Gly
230      35          40          45
232 Val Met Tyr Ala Glu Arg Arg Gly Val Arg Gln Asp Arg Ala Leu Ala
233      50          55          60
235 Gln Glu Trp Leu Gly Lys Ala Cys Gln Asn Gly Tyr Gln Asp Ser Cys
236      65          70          75          80
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244 <212> TYPE: DNA
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250 gcagcagccc aattcaattt gggcgtgatg tatgaaaatg gacaaggagt tgcacaagat 180
251 tatgtacagg cagtgcagtg gtagcgcaag gcttcagaaac aaggggatgc ccaagcccaa 240
252 tacaatttgg gctttagtga ttacgatgga cgcggcgtgc gccaagacct tgcgctcget 300
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259 <212> TYPE: PRT
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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/303,518A DATE: 10/12/2000  
TIME: 15:29:08

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Output Set: W:\CRF3\10122000\1303518A.raw

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270          35          40          45
272 Val Met Tyr Glu Asn Gly Gln Gly Val Arg Gln Asp Tyr Val Gln Ala
273          50          55          60
275 Val Gln Trp Tyr Arg Lys Ala Ser Glu Gln Gly Asp Ala Gln Ala Gln
276          65          70          75          80
278 Tyr Asn Leu Gly Leu Met Tyr Tyr Asp Gly Arg Gly Val Arg Gln Asp
279          85          90          95
281 Leu Ala Leu Ala Gln Gln Trp Leu Gly Lys Ala Cys Gln Asn Gly Asp
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296 ttggacggca agtatcagtt cagcagcgac gtttcggcgc aaatccctgac ttccgggactt 180
297 ttggggcgagc agtatcctgg gctgcagcag ggcggcgaca cggaaacct tgcrgccggc 240
298 gacaccatct ccgtaccag ttctgcaatg gttctggaaa accctatcgg caaattcatg 300
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304 <212> TYPE: PRT
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312          20          25          30
314 Tyr Gln Ala Arg Val Arg Leu Asp Leu Asp Gly Lys Tyr Gln Phe Ser
315          35          40          45
317 Ser Asp Val Ser Ala Gln Ile Leu Thr Ser Gly Leu Leu Gly Glu Gln
318          50          55          60
320 Tyr Ile Gly Leu Gln Gln Gly Gly Asp Thr Glu Asn Leu Ala Ala Gly
321          65          70          75          80
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334 <211> LENGTH: 859
335 <212> TYPE: DNA

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<sup>⓪</sup>ta<sup>⓪</sup>caaccgc cgcctgcata cgtgatggc gaccgcgctg aagtaagctc cgcggtttct 840  
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 taa 903

*see  
 item 10  
 on Enn  
 summary  
 sheet*

*FYI*

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/303,518A

DATE: 10/12/2000

TIME: 15:29:09

Input Set : N:\jumbo\09303518

Output Set: N:\CRF3\10122000\I301518A.raw

L:59 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
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L:63 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:67 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1  
L:106 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:112 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:115 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:136 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2  
L:352 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:389 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:407 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12  
L:793 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19  
L:796 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19  
L:822 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:831 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:834 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20  
L:931 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23  
L:931 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:23  
L:931 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:23  
L:931 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:23  
L:931 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:23  
L:942 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23  
L:942 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:23  
L:942 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:23  
L:942 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:23  
M:340 Repeated in SeqNo=23  
L:943 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23  
L:943 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:23  
L:943 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:23  
L:943 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:23  
L:944 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23  
L:944 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:23  
L:944 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:23  
L:944 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:23  
L:945 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:23  
L:945 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:23  
L:945 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:23  
L:945 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:23  
L:955 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24  
L:955 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:24  
L:955 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:24  
L:955 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:24  
L:955 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:24  
L:997 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24  
L:997 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:24

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/303,518A

DATE: 10/12/2000

TIME: 15:29:09

Input Set : N:\jumbos\09303518

Output Set : N:\CRF3\10122000\I303518A.raw

L:997 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:24  
 L:997 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:24  
 M:340 Repeated in SeqNo=34  
 L:1000 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24  
 L:1000 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:24  
 L:1000 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:24  
 L:1000 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:24  
 L:1003 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24  
 L:1003 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:24  
 L:1003 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:24  
 L:1003 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:24  
 L:1009 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:24  
 L:1009 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:24  
 L:1009 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:24  
 L:1009 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:24  
 L:1024 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25  
 L:1224 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:30  
 L:1224 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:30  
 L:1224 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:30  
 L:1224 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:30  
 L:1224 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:30  
 L:1230 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:30  
 L:1230 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:30  
 L:1230 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:30  
 L:1230 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:30  
 M:340 Repeated in SeqNo=30  
 L:1441 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35  
 L:1812 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:43  
 L:1812 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:43  
 L:1812 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:43  
 M:340 Repeated in SeqNo=43  
 L:1860 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:44  
 M:340 Repeated in SeqNo=44  
 L:1977 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45  
 L:2270 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:50  
 L:2437 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:53  
 M:340 Repeated in SeqNo=53  
 L:2473 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:54  
 M:340 Repeated in SeqNo=54  
 L:2590 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55  
 L:2812 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:59  
 L:2814 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:59  
 L:2815 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:59  
 L:2816 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:59  
 L:2833 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:60  
 M:340 Repeated in SeqNo=60  
 L:2858 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:61  
 M:340 Repeated in SeqNo=61  
 L:2879 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:62

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/303,518A

DATE: 10/12/2000

TIME: 15:29:09

Input Set : W:\jumbo\09303518

Output Set: W:\CLF3\10122000\I303518A.raw

M:340 Repeated in SeqNo=62  
L:3012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:67  
L:3022 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:68  
M:340 Repeated in SeqNo=68  
L:3205 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73  
L:3325 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:77  
L:3347 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:78  
M:340 Repeated in SeqNo=78  
L:3688 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85  
L:3696 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85  
L:3718 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:86  
L:3769 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:87  
L:3824 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:88  
L:3922 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:91  
L:4185 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:99  
M:340 Repeated in SeqNo=99  
L:4219 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:100  
M:340 Repeated in SeqNo=100  
L:4319 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103  
L:4321 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103  
L:4323 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103  
L:4324 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103  
L:4342 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:104  
M:340 Repeated in SeqNo=104  
L:4738 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109  
L:5035 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:113  
L:5040 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:113  
L:5053 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:113  
L:5054 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:113  
L:5075 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:114  
M:340 Repeated in SeqNo=114  
L:5312 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:117  
L:5388 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:118  
L:5442 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:119  
L:5716 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:124  
L:5862 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:127  
M:340 Repeated in SeqNo=127  
L:5897 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:128  
M:340 Repeated in SeqNo=128  
L:5987 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:129  
L:6193 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:133  
L:6218 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:134  
M:340 Repeated in SeqNo=134  
L:6711 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:141  
M:340 Repeated in SeqNo=141  
L:6728 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:142  
M:340 Repeated in SeqNo=142  
L:6822 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:144  
L:6880 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:145

JUN 25 2001 3:00PM

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/303,518A

DATE: 10/12/2000

TIME: 15:29:09

Input Set : H:\jumbos\09303518

Output Set : H:\CHP3\10122000\I303518A.raw

L:6978 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:147  
 L:6982 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:147  
 L:6983 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:147  
 L:6996 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:148

10/12/00

NOV. 25, 2001 3:00PM

**RAW SEQUENCE LISTING**  
**ERROR REPORT**

BIOTECHNOLOGY  
SYSTEMS  
BRANCH

OCT 25 2001

TECH CENTER 1600/2380

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:

09/303,518A

Source:

1631

Date Processed by STIC:

10/12/2000

**THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.**

**PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:**

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

**FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.**

**FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.**

**PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)**

**PATENTIN 3.0 e-mail help: [patin30help@uspto.gov](mailto:patin30help@uspto.gov) or phone 703-306-4119 (R. Wax)**

**TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:**

**Checker Version 3.0**

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

**Checker Version 3.0 can be down loaded from the USPTO website at the following address:**

**<http://www.uspto.gov/web/offices/pac/checker>**

# Raw Sequence Listing Error Summary

OCT 25 2000

## ERROR DETECTED SUGGESTED CORRECTION

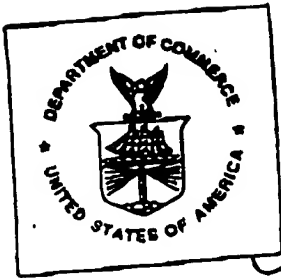
SERIAL NUMBER:

09/30/99 1600/2900

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1        Wrapped Nucleics      The number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
- 2        Wrapped Aminos      The amino acid number/text at the end of each line "wrapped" down to the next line.  
This may occur if your file was retrieved in a word processor after creating it.  
Please adjust your right margin to .3, as this will prevent "wrapping".
- 3        Incorrect Line Length      The rules require that a line not exceed 72 characters in length. This includes spaces.
- 4        Misaligned Amino Acid Numbering      The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs between the numbering. It is recommended to delete any tabs and use spacing between the numbers.
- 5        Non-ASCII      This file was not saved in ASCII (DOS) text, as required by the Sequence Rules.  
Please ensure your subsequent submission is saved in ASCII text so that it can be processed.
- 6        Variable Length      Sequence(s)        contain n's or Xaa's which represented more than one residue.  
As per the rules, each n or Xaa can only represent a single residue.  
Please present the maximum number of each residue having variable length and indicate in the (ix) feature section that some may be missing.
- 7        PatentIn ver. 2.0 "bug"      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequence(s)       . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies primarily to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 8        Skipped Sequences (OLD RULES)      Sequence(s)        missing. If intentional, please use the following format for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO:X:  
(i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS")  
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X:  
This sequence is intentionally skipped  
  
Please also adjust the "(li) NUMBER OF SEQUENCES:" response to include the skipped sequence(s).
- 9        Skipped Sequences (NEW RULES)      Sequence(s)        missing. If intentional, please use the following format for each skipped sequence.  
<210> sequence id number  
<400> sequence id number  
000
- 10        Use of n's or Xaa's (NEW RULES)      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.  
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 11        Use of <213> Organism (NEW RULES)      Sequence(s)        are missing this mandatory field or its response.
- 12        Use of <220> Feature (NEW RULES)      Sequence(s)        are missing the <220> Feature and associated headings.  
Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial" or "Unknown"  
Please explain source of genetic material in <210> to <223> section.  
(See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rules)
- 13        PatentIn ver. 2.0 "bug"      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing).  
Instead, please use "File Manager" or any other means to copy file to floppy disk.





**FAX**

TELECOPY/FACSIMILE TRANSMISSION

DATE: 6/26/01

PAGES: 2  
(No. of pages including this cover sheet)

TO: Mark Rosen  
(ATTORNEY, AGENT, FIRM OR AGENCY)

09/303,518

(ATTORNEY'S DOCKET NUMBER OR APPLICATION NUMBER)

215-568-3439

(FAX/TELECOPIER NUMBER)

FROM: S. "Joe" Zhou, EXAMINER,

ART UNIT 1631 PHONE NUMBER: (703) 605-1158

Remarks:

The attachment: Raw Sep. 2.3.4 Error Report was not faxed. It is the same one as that mailed to applicants in Paper # 13, mailed 5/31/01.

RECEIVED  
JUN 26 2001  
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UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address: ASSISTANT COMMISSIONER FOR PATENTS

Washington, D.C. 20231

APPLICATION NO/ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
--------------------------------	-------------	---	---------------------



EXAMINER
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ART UNIT	PAPER
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14

DATE MAILED:

**Please find below and/or attached an Office communication concerning this application or proceeding.**

Commissioner of Patents and Trademarks

The communication in Paper # 12, filed on 10/12/2000, is non-responsive to the prior office action, mailed 9/5/2000, because of the following reason:

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a) (2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 because the computer readable form of the Sequence Listing provided in Paper # 12 is defective. Please see the attached Raw Sequence Listing Error Report. Failure to respond to this requirement may result in abandonment of the instant application.

Since the response appears to be bona fide, but through an apparent oversight or inadvertence failed to provide a complete response, applicant is required to complete the response within a time limit of one month from the date of this letter or as extended as follows. **AN EXTENSION OF THIS TIME LIMIT MAY BE GRANTED UNDER EITHER 37 C.F.R. 1.136(a) OR (b) UP TO A MAXIMUM OF SIX MONTHS.**

Please note that the Office communication concerning this application in Paper # 13, mailed 5/31/01 is hereby vacated because it was sent by an inadvertent error.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The CM1 Fax Center number is either (703) 308-4242 or (703)305-3014.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to: Shubo "Joe" Zhou, Ph.D., whose telephone number is (703) 605-1158. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (703) 308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Patent Analyst Tina Plunkett whose telephone number is (703)-305-3524, or to the Technical Center receptionist whose telephone number is (703) 308-0196.

S. "Joe" Zhou, Ph.D.

ATTACHMENT: RAW SEQUENCE LISTING ERROR REPORT

PTO-90C (Rev.3-98)

JOHN S. BRUSCA, Ph.D.  
PRIMARY EXAMINER

*John S. Brusca*